

JUNE 2020

BIG CYPRESS BASIN HYDROLOGIC REPORT

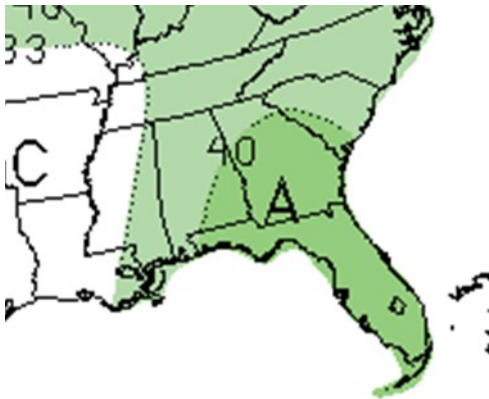


SUMMARY OF HYDROLOGIC CONDITIONS IN THE BIG CYPRESS BASIN

June 2020

SUMMARY

June started with a typical summertime pattern of daily thunderstorms. Water levels throughout the Basin continued to increase from dry season lows in May. The last third of the month was abnormally dry as high pressure and an abnormally intense Saharan dust event kept rainfall activity very low. Rainfall for the month ended a couple inches below normal or 80% of average. The Basin continued operations in flood control mode until the dry period took hold of the Basin when it was once again transitioned to water conservation mode.



Looking forward, the 30 day outlook for July (left) is indicating above average chances for above average rainfall and the 3 month outlook (right) for August, September, and October is also indicating an above average chance for above average rainfall.



BCB RAINFALL

Rainfall in June was below normal due to the long dry streak towards the end of the month. As measured by twenty-two (22) reporting stations (ref. **Figures 1, 2, Table 1**), the basin-wide monthly average was **8.03 inches (80% of normal)**, which is below the average 9.97 inches typically collected.

Based on collected gauge data, the rainfall distribution across the Basin was highly variable given the typical summertime afternoon thunderstorm pattern that established across the region. The month's highest total was collected at the Marco Island Water Plant (Site R-15), which received **13.2 inches**. This month's lowest rainfall was recorded at Rookery Bay (Site R-10), which received **3.41 inches**. The rainfall totals and their locality distribution across the BCB/Lower West Coast are shown on **Figure 3**.

BCB CANAL SYSTEMS

All of the canals were maintained in flood control operations for a majority of the month and most were operated near the top of normal operational ranges. As the dry streak started operations were transitioned to conservation mode and some sites were moved to dry season criteria to conserve water. Discharges from all coastal structures continued for flood control for the month, but discharges were reduced during the dry period to conserve water.

- **GOLDEN GATE SYSTEM**

The Golden Gate Main canal system was operated in flood control mode and continued to be maintained near the top of normal operation range as the Basin is still recovering from a drought. Canal water levels in most areas of the Golden Gate system were held to 90th percentile as the month ended. (ref **Figure 5A & 5B**).

- **COCOHATCHEE SYSTEM**

The western half of Cocohatchee system was maintained in flood control operations, while the eastern half continued to need additional rainfall to bring water levels to normal wet season operating levels. The western half of the system was maintained above the 75th percentile as the month ended and the eastern half is still near the 50th percentile (ref **Figure 6A, 6B, 6C, & 6D**).

- **FAKA UNION SYSTEM**

Most of the Faka Union system was transitioned to wet season operations with the exception of FU4S which still needs substantial water to recover to normal operations mode. Just like the rest of the Basin, Faka Union was transitioned to dry season operations as the month ended. (ref **Figure 7A & 7B**).

- **HENDERSON CREEK SYSTEM**

The Henderson Creek system also continued to fill up as wet season continued. Levels did begin to decline towards the end of the month without any operational changes to the system. Levels are near the 50th percentile as the month ended. (ref **Figure 8A & 8B**).

- **CORKSCREW SWAMP**

Figure 10 shows the historical trends for Corkscrew, Bird Rookery, and Cork 3 structure and the 2020 corresponding levels. All three sites have continued to recover from low water conditions starting mid-May until near the end of the month when levels started to decrease rapidly with little rainfall, hot and sunny conditions. Cork 3, Bird Rookery, and CRKSWPS are near historic minimums as the month ended. Water levels at Lake Trafford are shown in **Figure 10A**, which show lake levels nearing the 50th percentile.

BIG CYPRESS BASIN & LOWER WEST COAST GROUNDWATER LEVELS

The current reporting (07/01/2020) for the Lower West Coast [LWC] indicates nearly flat levels from the beginning of the month. Levels rose sharply for the first half of the month with the excess rainfall, while the levels decreased almost the same amount the second half of June with almost zero rainfall. By the end of June, only one reporting well (C1004R) is still in the low concern condition indicator (yellow color) (ref. **Table 2**). All other reporting wells have maintained normal conditions (green color). All reported wells in **Table 2** show an average increase of 0.79 feet. L-2194 recorded the highest increase of 2.02 feet, and C-1004R had largest decrease of 1.14 feet. Many reported wells have now decreased to below the 25th percentile and nearing historic minimum for this time of year (ref. **Table 2, Figure 9**).

BIG CYPRESS BASIN

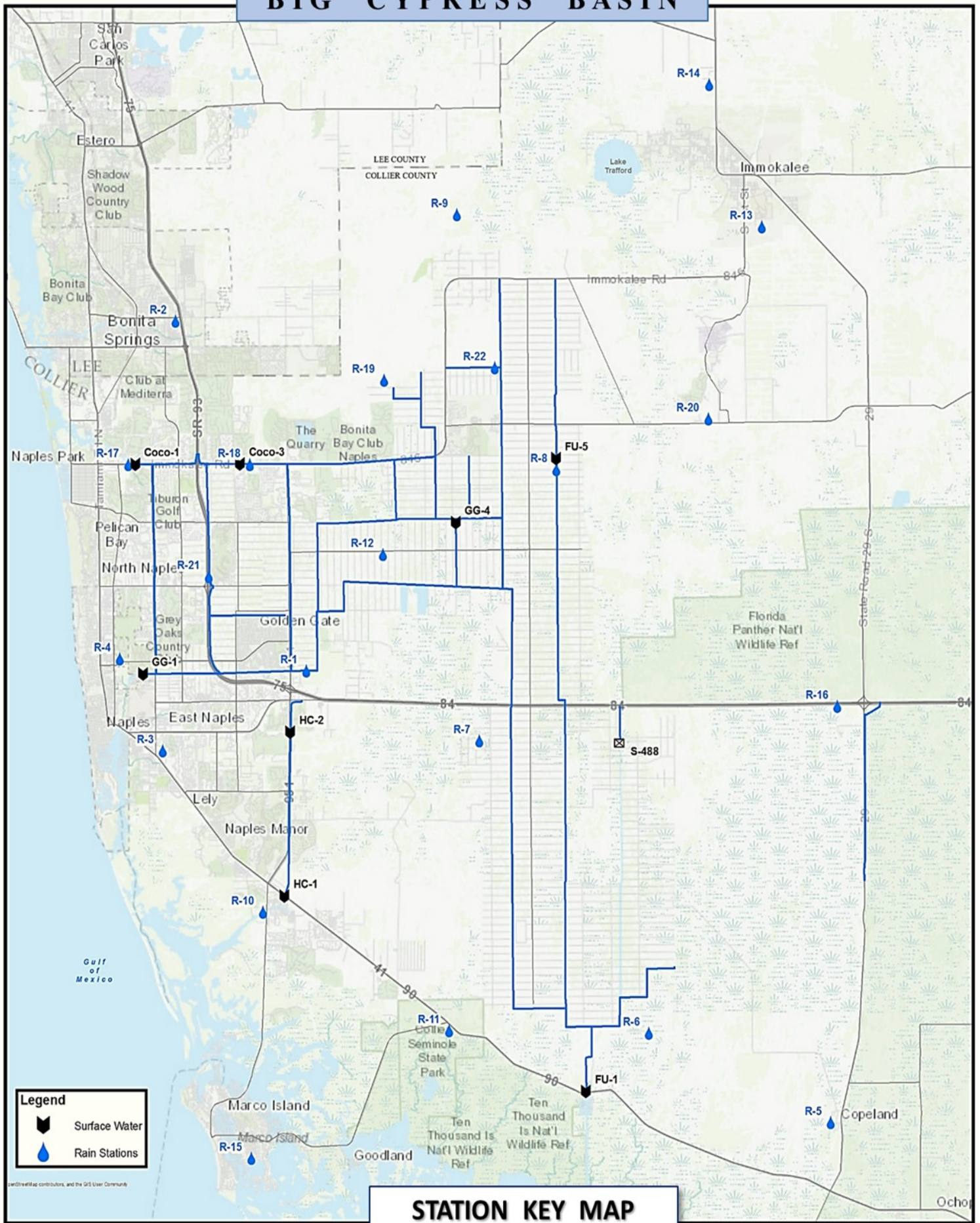


FIGURE 1

TABLE 1
RAINFALL REPORT - JUNE 2020
DISTRICT/BASIN RAINFALL STATIONS

(ALL NUMBERS ARE IN INCHES)

STATION INDEX NO.	STATION NAME	JUNE 2020	LONG TERM AVERAGE FOR THIS MONTH	MONTHLY DIFFERENCE	CALENDAR YEAR 2020 CUMULATIVE TOTAL	AVERAGE CALENDAR YEAR TO DATE	YEAR TO DATE DIFFERENCE
R-1	GOLDEN GATE #3	8.25	13.60	-5.35	23.04	27.68	-4.64
R-2	BONITA SPRINGS WATER PLANT	8.25	8.43	-0.18	17.37	20.26	-2.89
R-3	COLLIER COURTHOUSE	10.01	8.28	1.73	24.38	20.23	4.15
R-4	FREEDOM PARK	11.38	8.89	2.49	25.59	21.56	4.03
R-5	FAKAHATCHEE STRAND HQ	12.75	11.03	1.72	19.89	24.27	-4.38
R-6	DAN HOUSE PRAIRIE	8.93	8.83	0.10	22.62	19.50	3.12
R-7	SGGE WEATHER STATION	7.18	11.26	-4.08	21.06	23.34	-2.28
R-8	FAKA UNION #5	6.77	14.67	-7.90	15.55	30.02	-14.47
R-9	CORKSCREW SWAMP NORTH END	7.26	11.68	-4.42	14.92	22.75	-7.83
R-10	ROOKERY BAY HQ	3.41	9.93	-6.52	15.76	21.09	-5.33
R-11	COLLIER SEMINOLE STATE PARK	8.53	9.91	-1.38	20.25	21.63	-1.38
R-12	G.G. FIRE STATION	4.81	10.01	-5.20	18.88	22.62	-3.74
R-13	IMMOKALEE LANDFILL	11.22	8.83	2.39	25.00	22.35	2.65
R-14	IFAS	5.67	8.85	-3.18	14.60	22.11	-7.51
R-15	MARCO R.O. PLANT	13.23	9.00	4.23	21.89	21.19	0.70
R-16	FAKAHATCHEE STRAND NORTH END	8.84	10.61	-1.77	19.67	25.83	-6.16
R-17	COCO#1	6.95	8.32	-1.37	17.45	18.99	-1.54
R-18	COCO#3	7.03	8.45	-1.42	20.20	19.42	0.78
R-19	BIRD ROOKERY	6.40		New Site	18.93	No Historical Data	
R-20	AVE MARIA	5.09	8.92	-3.83	18.31	22.56	-4.25
R-21	I75W2	8.31		New Site	23.69	No Historical Data	
R-22	GG#7	6.38		New Site	16.25	No Historical Data	

AVERAGES	8.03	9.97	-1.94	19.79	22.49	-2.71
----------	------	------	-------	-------	-------	-------

BCB ANNUAL RAINFALL
MONTHLY AVERAGE & HISTORICAL AVERAGE TRENDS
(FROM BCB RAINFALL GAUGE DATA)

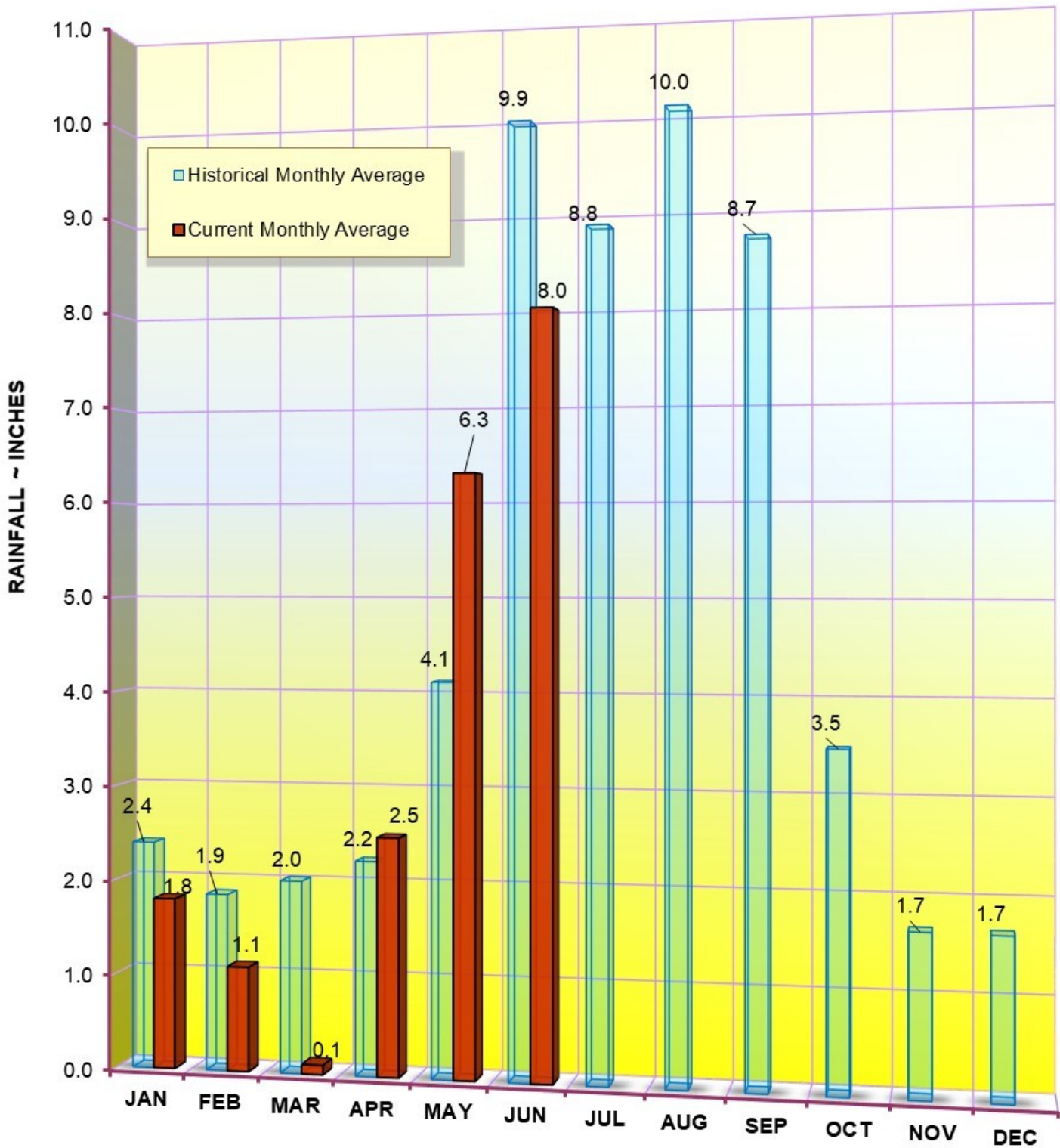
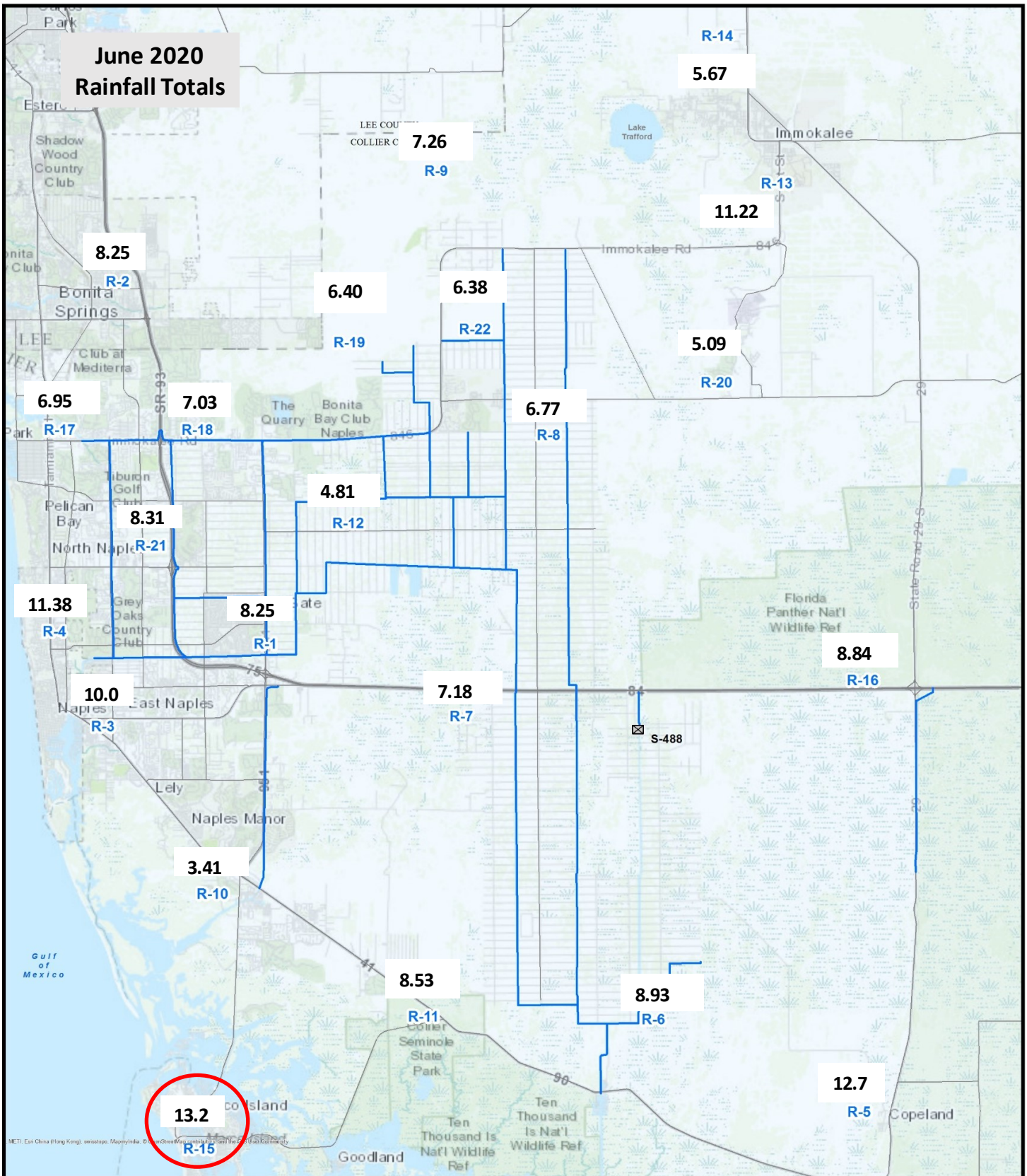


FIGURE 2
BCB GAUGE RAINFALL
MONTHLY AVERAGES THROUGH JUNE 2020



**FIGURE 3
BCB RAINFALL DISTRIBUTION
JUNE 2020**

BCB JUNE RAINFALL
Period (1990 ~ 2020)

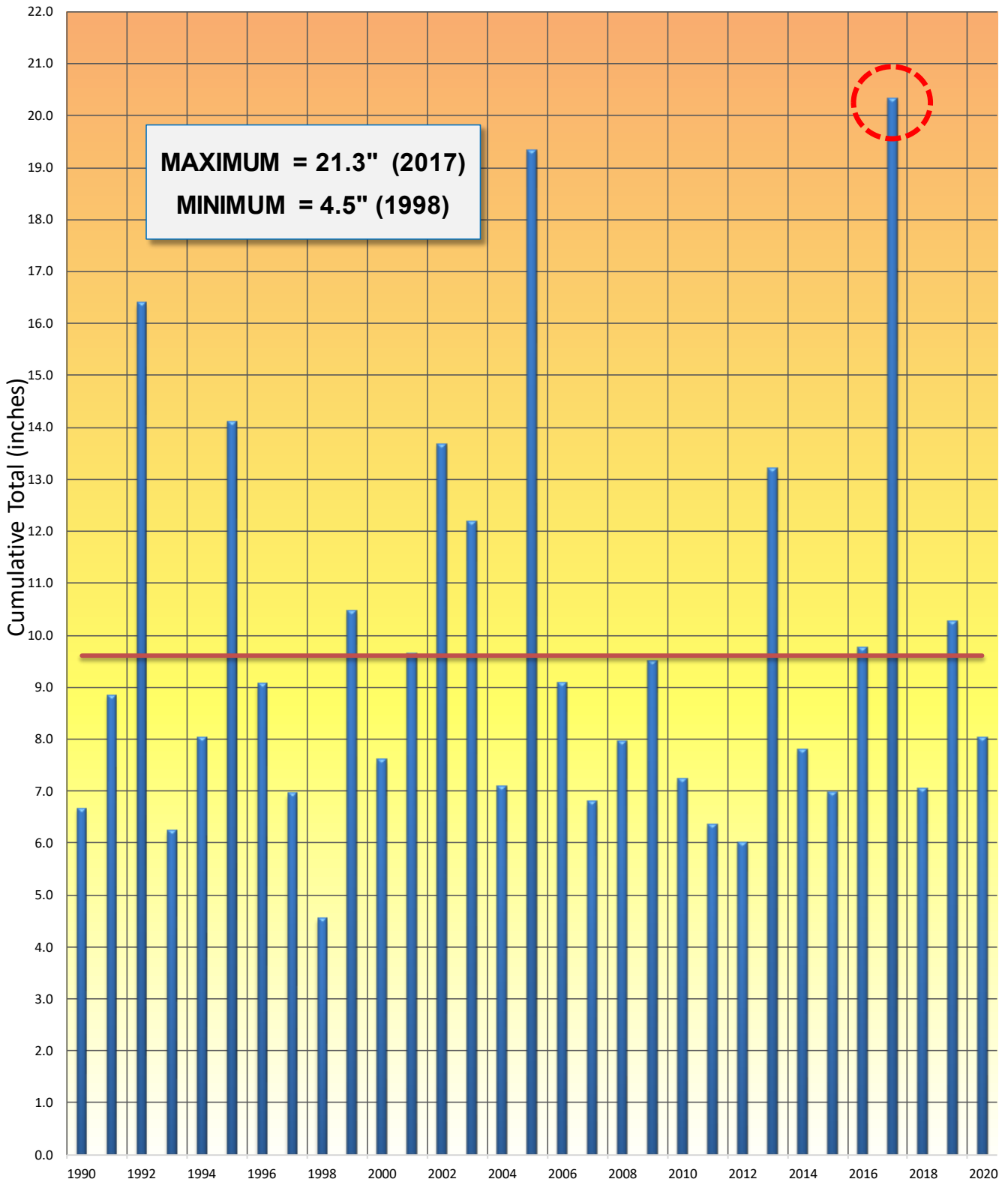
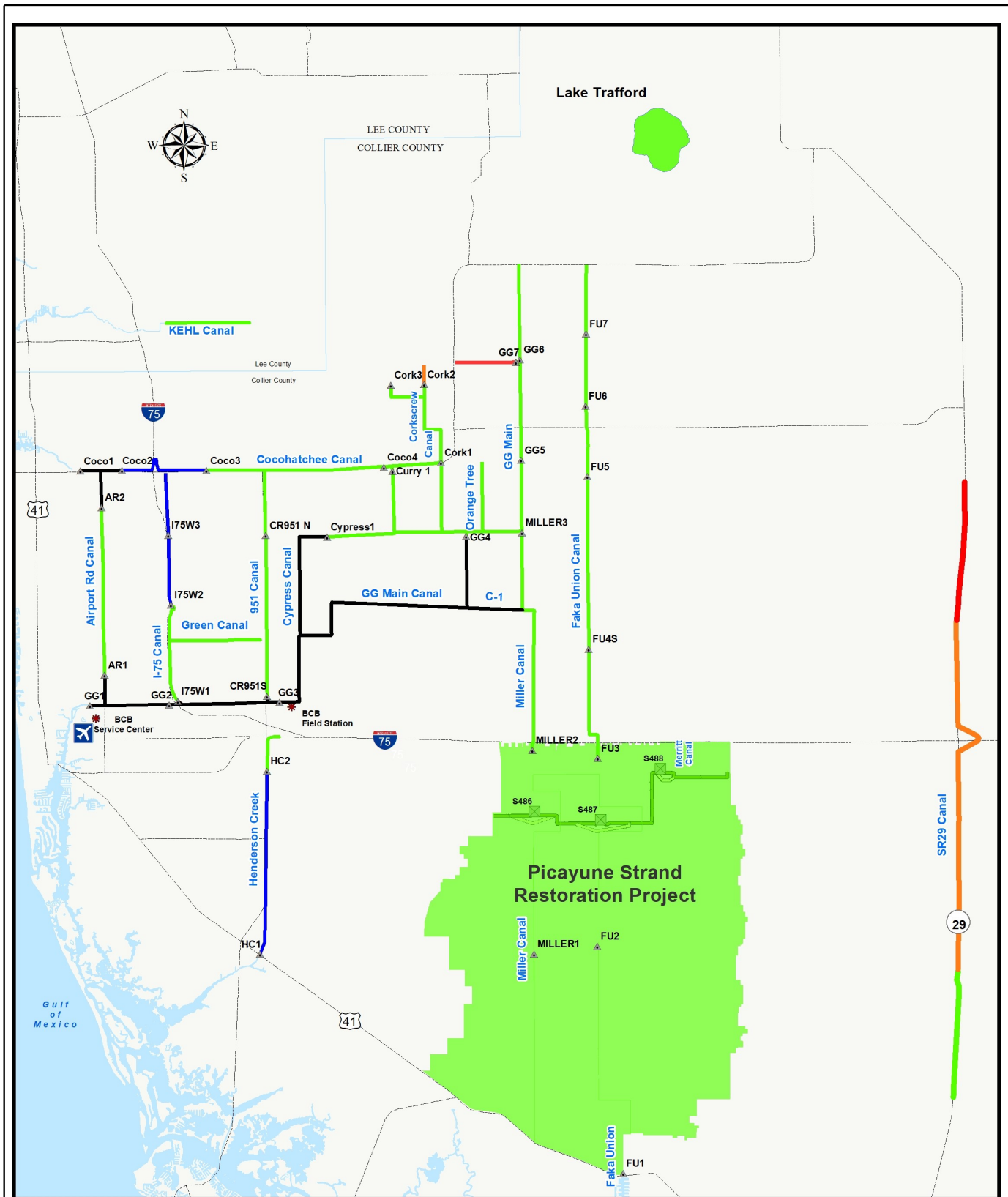
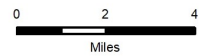
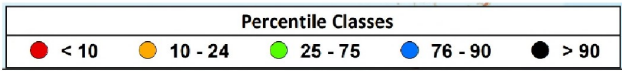


FIGURE 4
HISTORICAL TRENDS
(PERIOD OF RECORD: 1990—2020)



DISCLAIMER
 Any information, including but not limited to software and data, received from the South Florida Water Management District ("District") in fulfillment of a request is provided "AS IS" without warranty of any kind, and the District expressly disclaims all express and implied warranties, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. The District does not warrant, guarantee, or make any representations regarding the use, or the results of the use, of the information provided by us to the District in terms of completeness, accuracy, reliability, timeliness or otherwise. The entire risk as to the results and performance of any information obtained from the District is entirely assumed by the recipient.

This map is a conceptual tool utilized for project development only. This map is not self-executing or binding, and does not otherwise affect the interests of any persons including any vested rights or existing uses of real property.



* Based on period of record for each canal reach



BIG CYPRESS BASIN
 SFWMD
 2660 Horseshoe Dr. N.
 Naples, Florida 34104
 239-263-7615

BCB Conditions Index
Week of 7/4/20
 Urban Collier County, Florida



FIGURE 4A

Figure 5A - GG1 Historic Average Daily Headwater Percentiles (2004-2018)

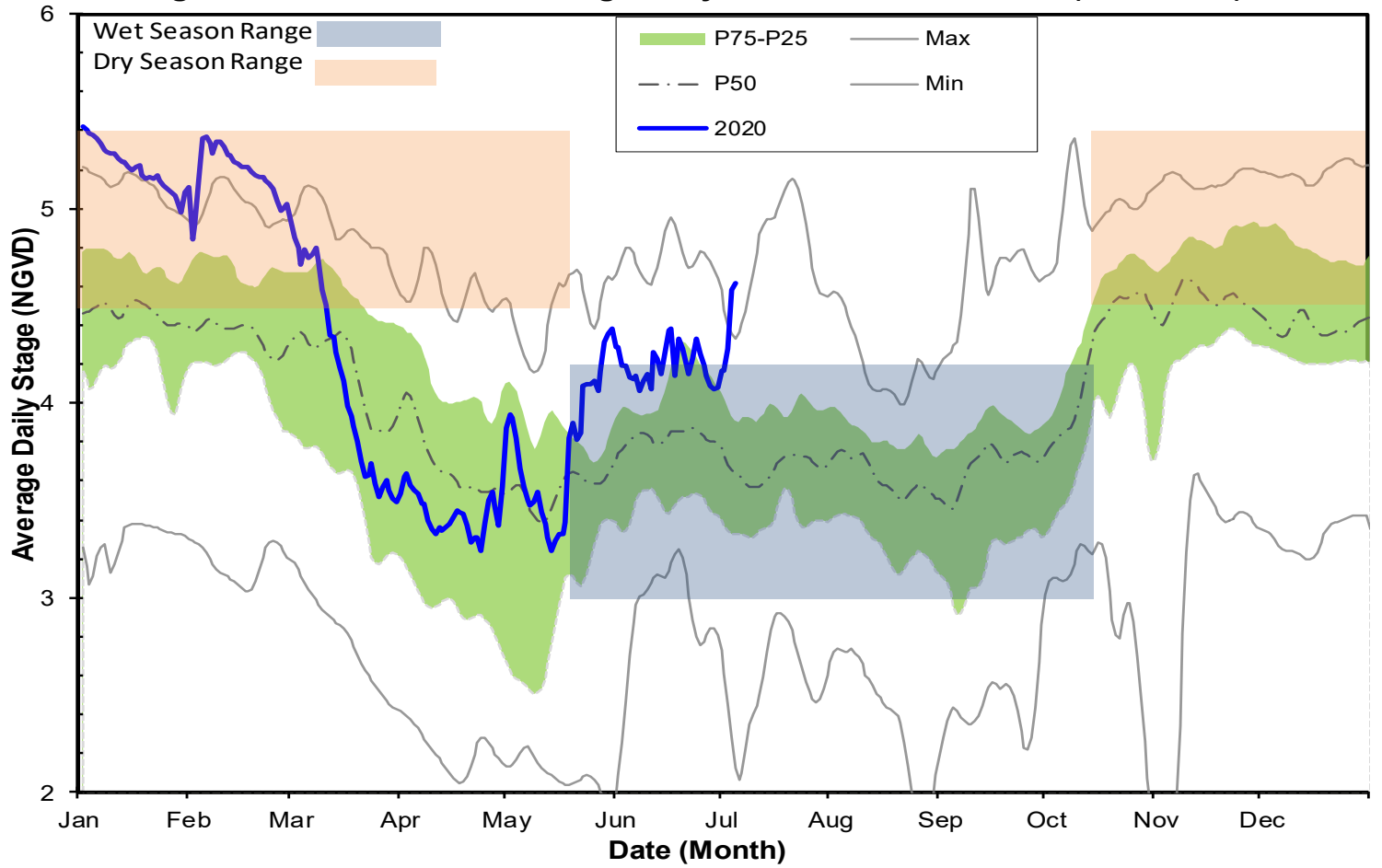


Figure 5B - GG4 Historic Average Daily Headwater Percentiles (1994-2017)

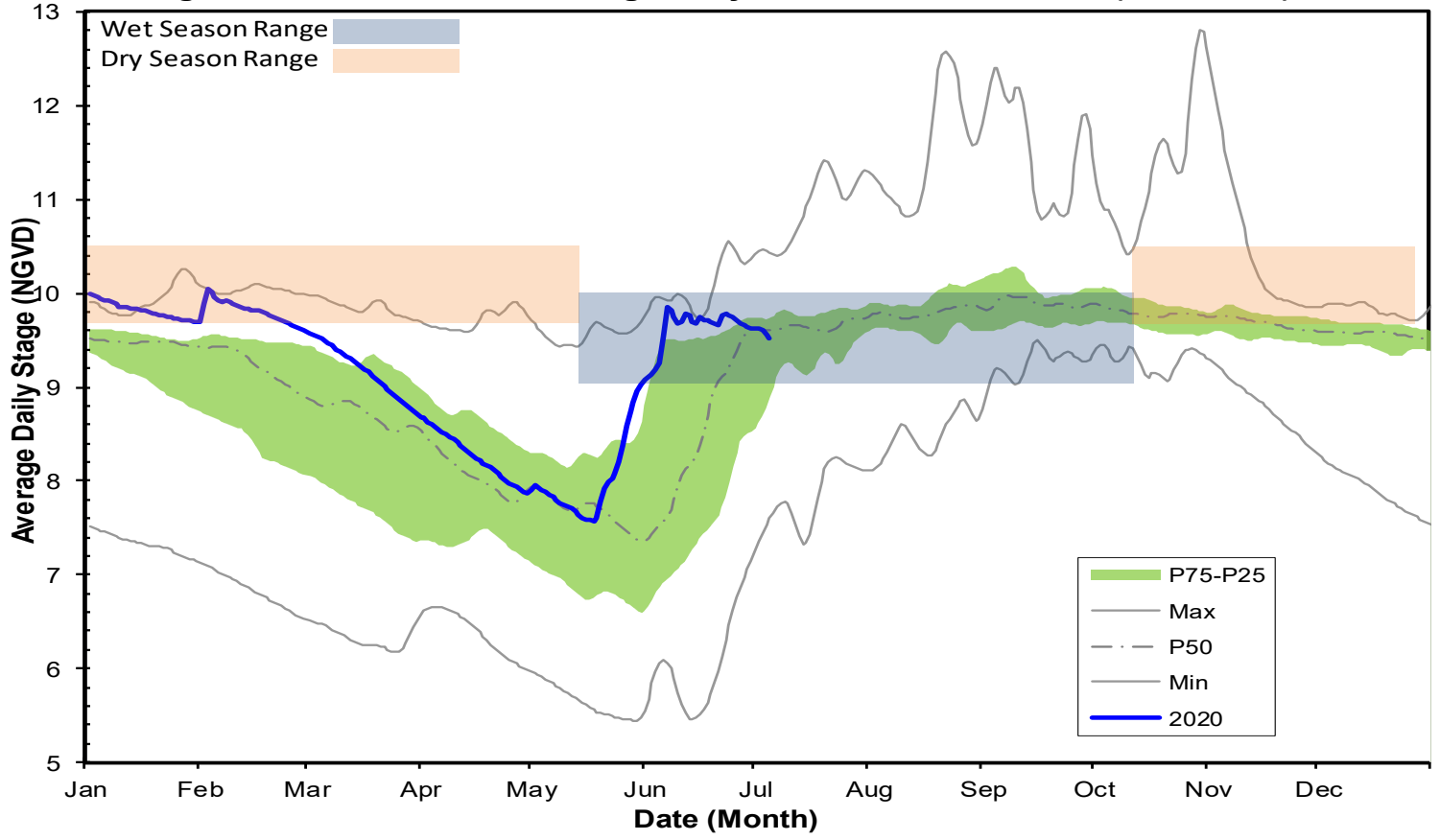


Figure 6A - COCO1 Historic Daily Headwater Percentiles (1994-2018)

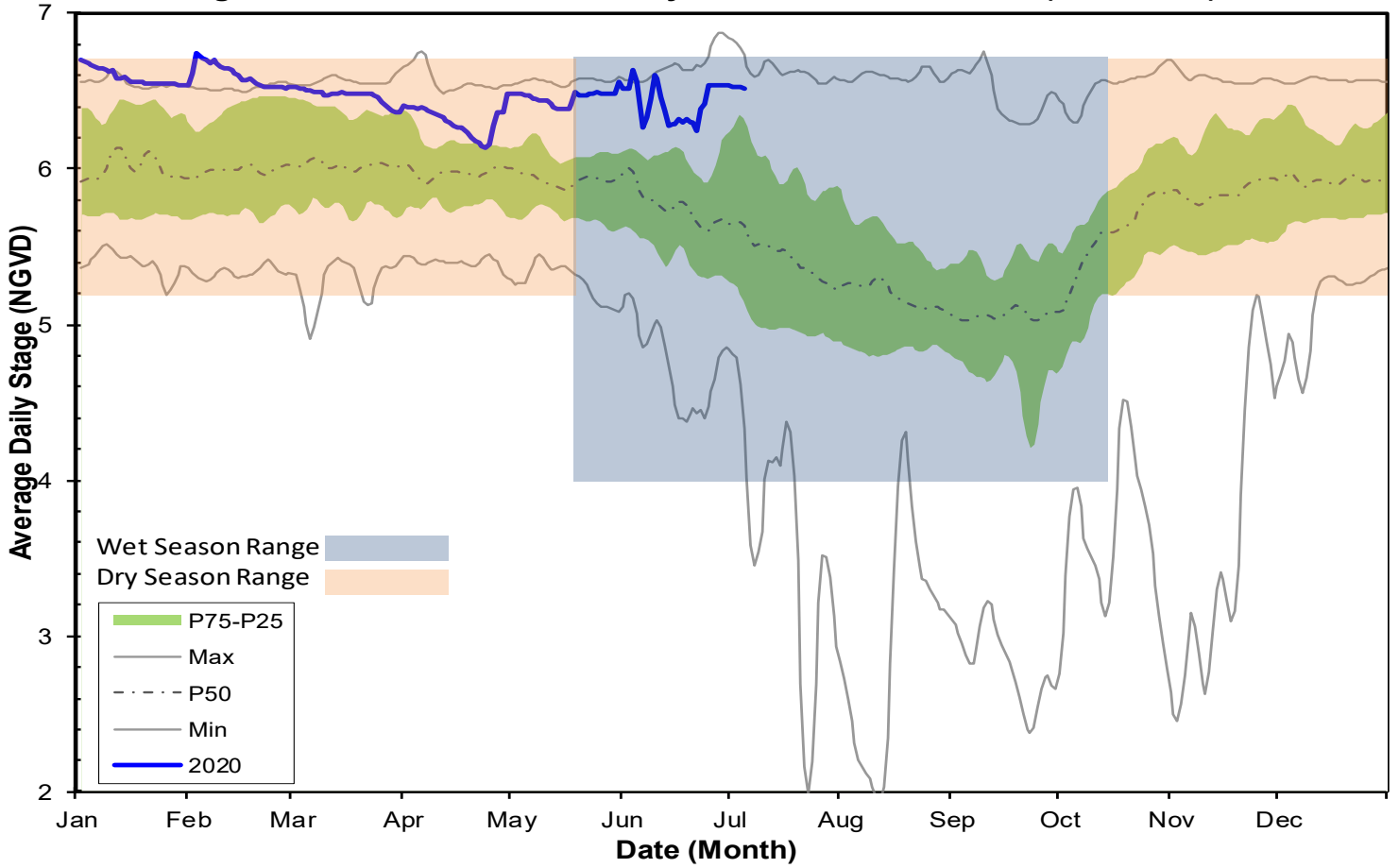


Figure 6B - COCO3 Historic Average Headwater Percentiles (2000-2018)

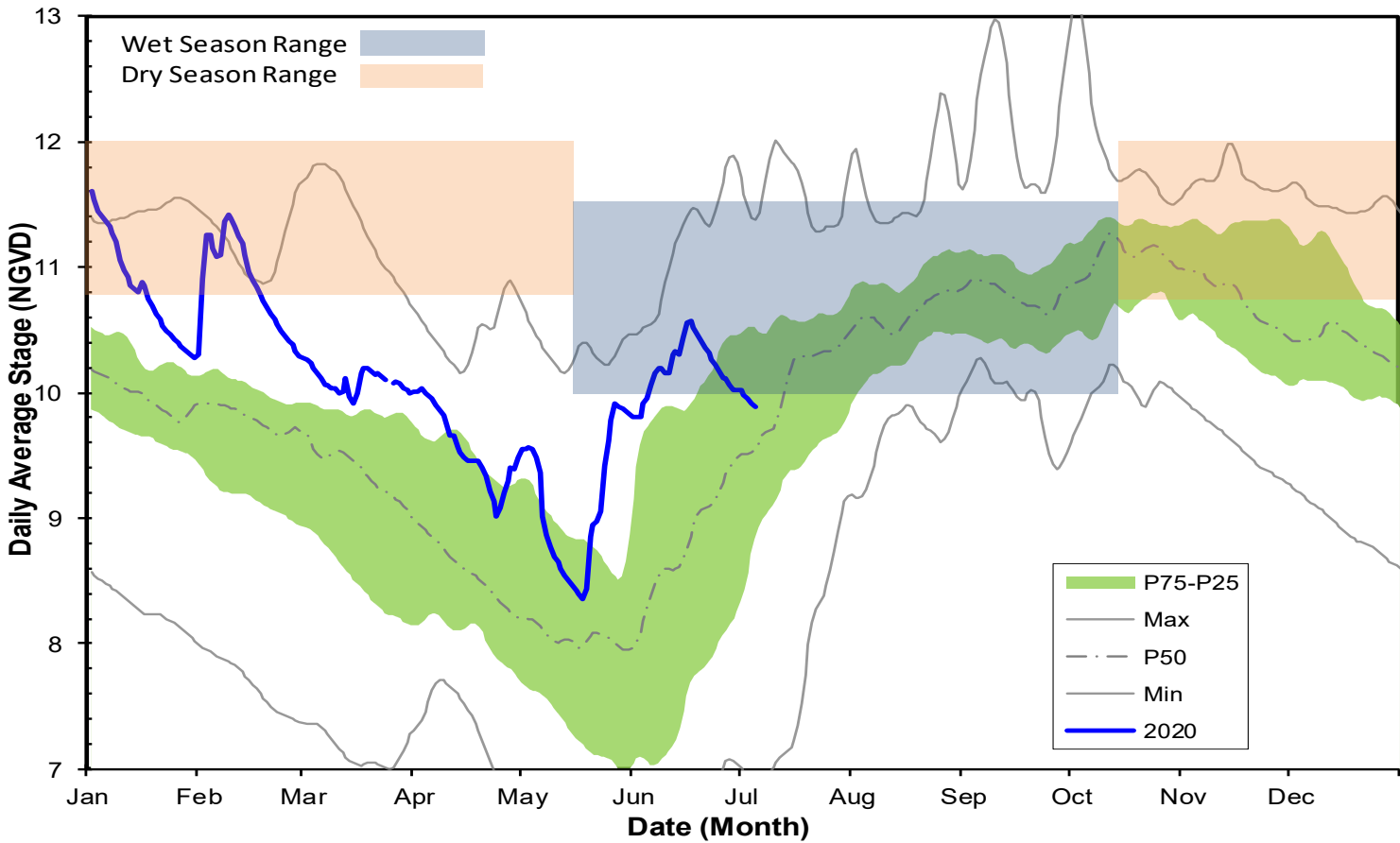


Figure 6C - CORK1 Historic Average Daily Headwater Percentiles (1989-2018)

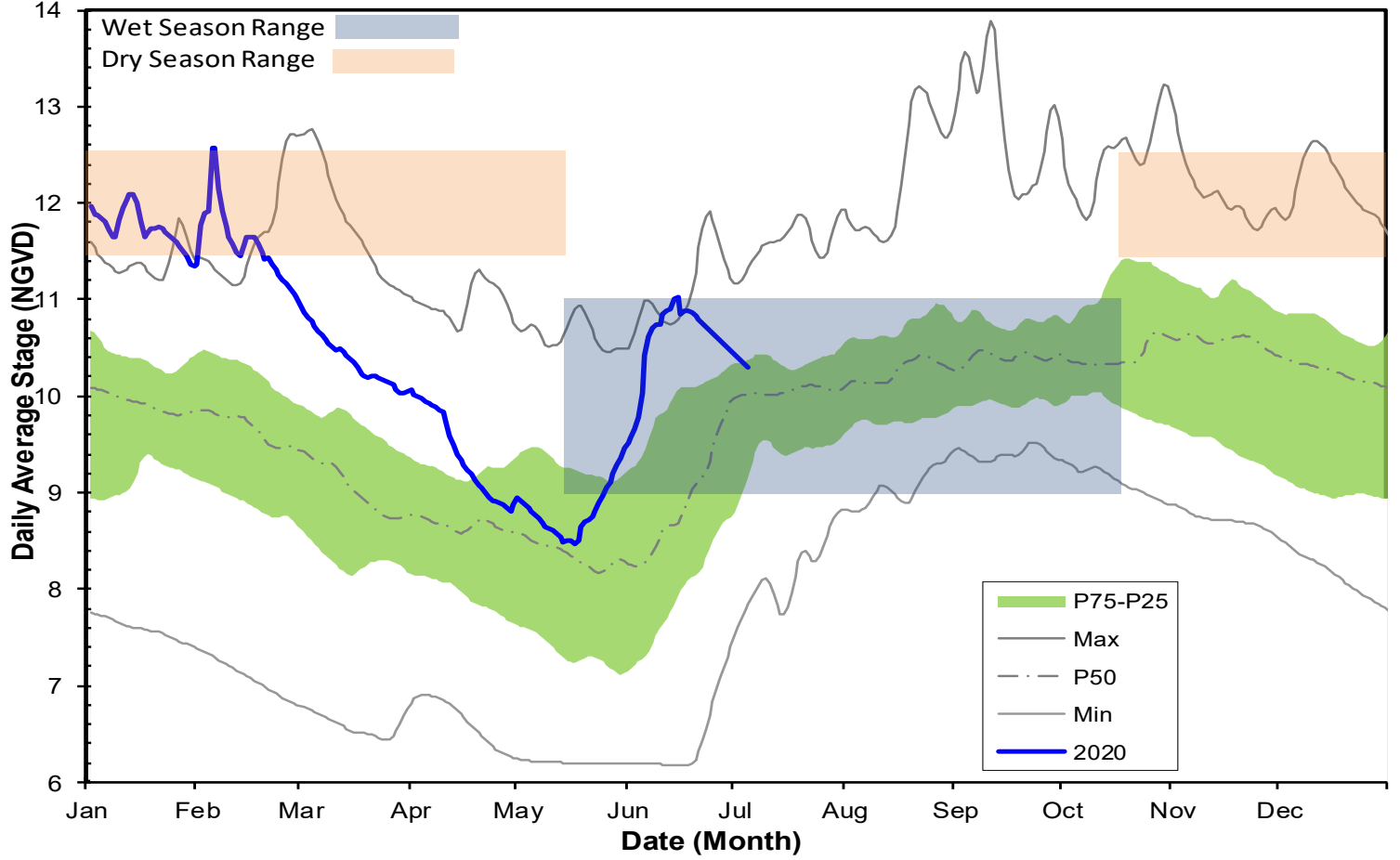


Figure 6D - CORK3 Average Daily Headwater Percentiles (2004-2018)

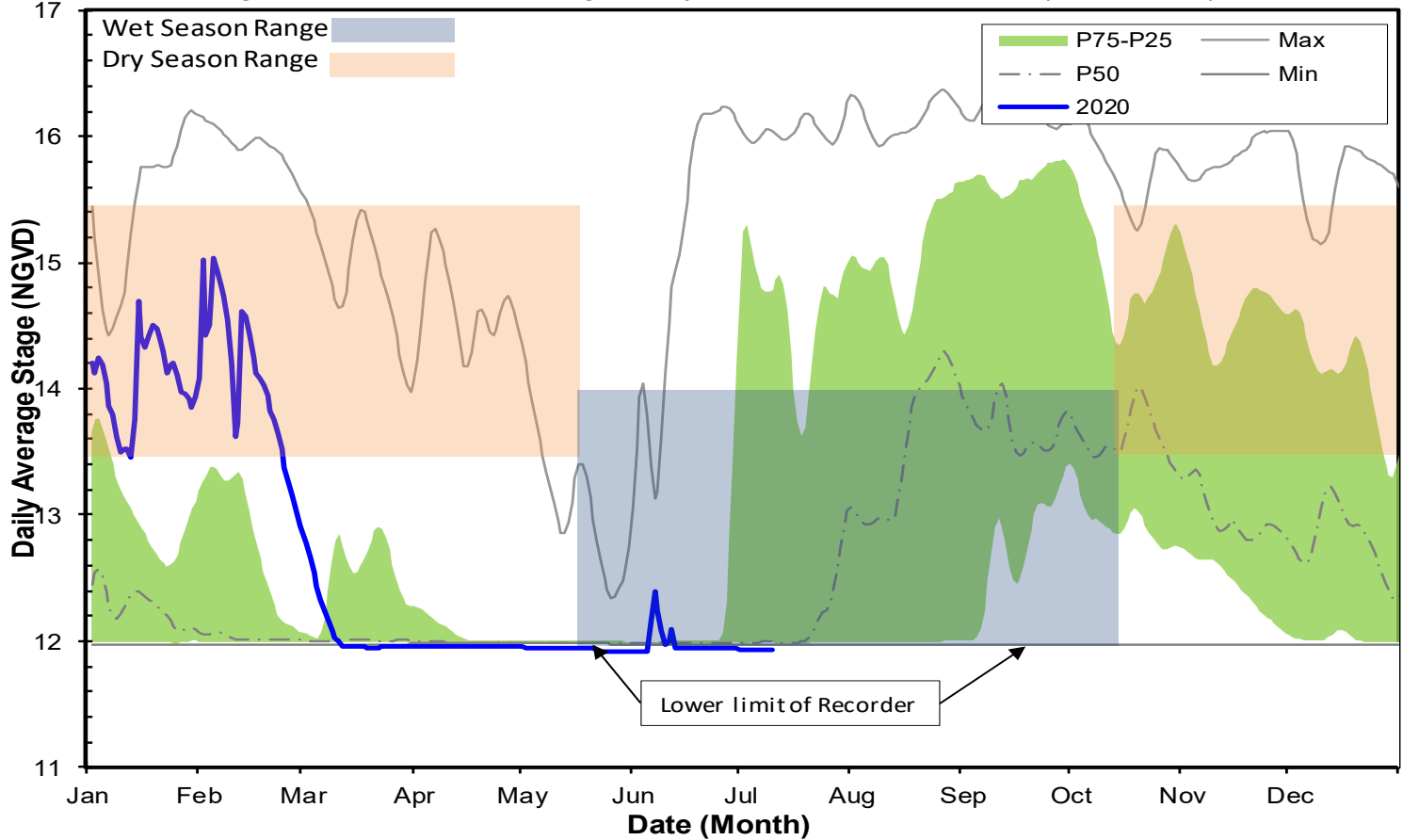


Figure 7A - FU1 Historic Average Daily Headwater Percentiles (1984-2018)

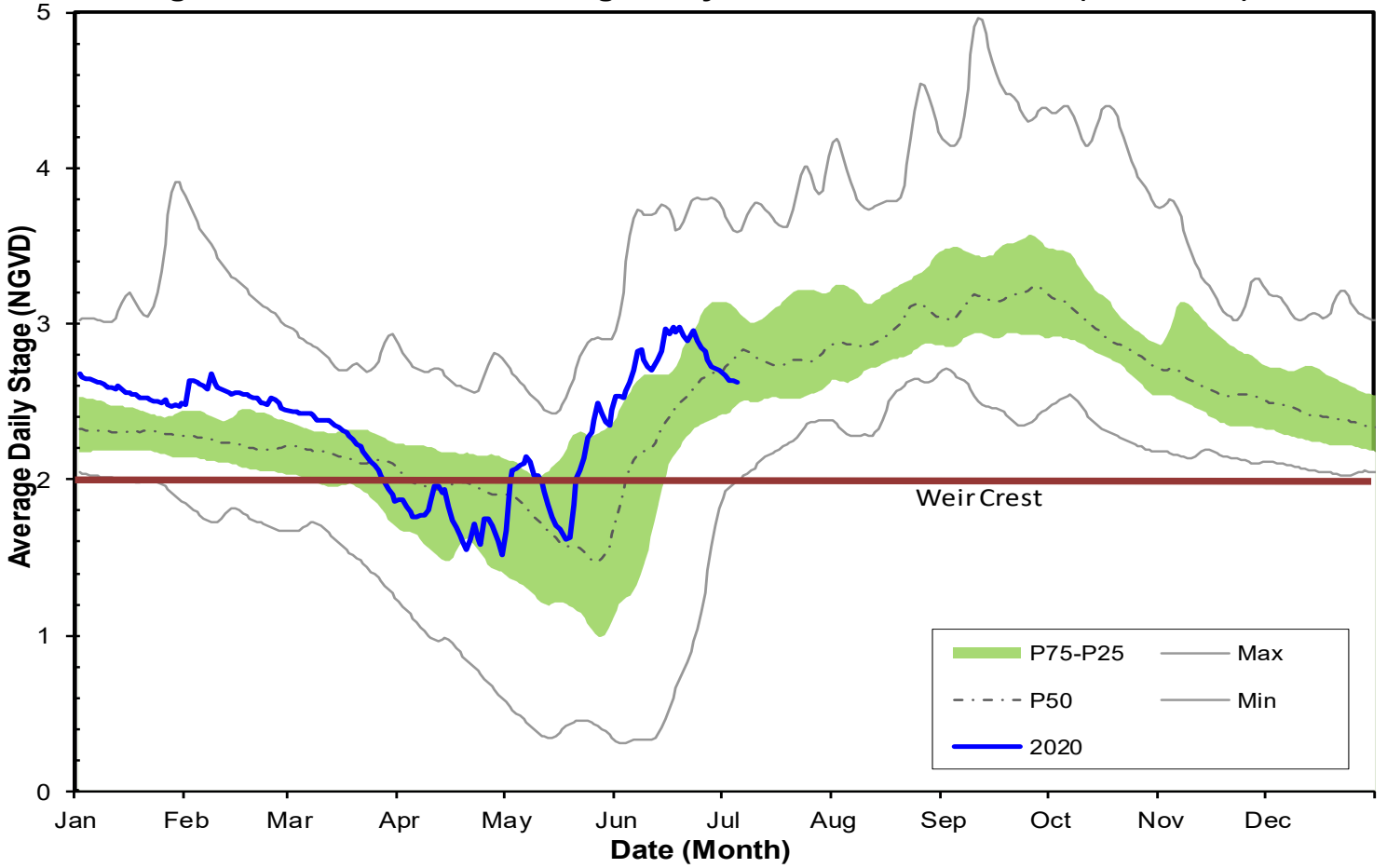


Figure 7B-FU5 Historic Average Daily Headwater Percentiles (2003-2018)

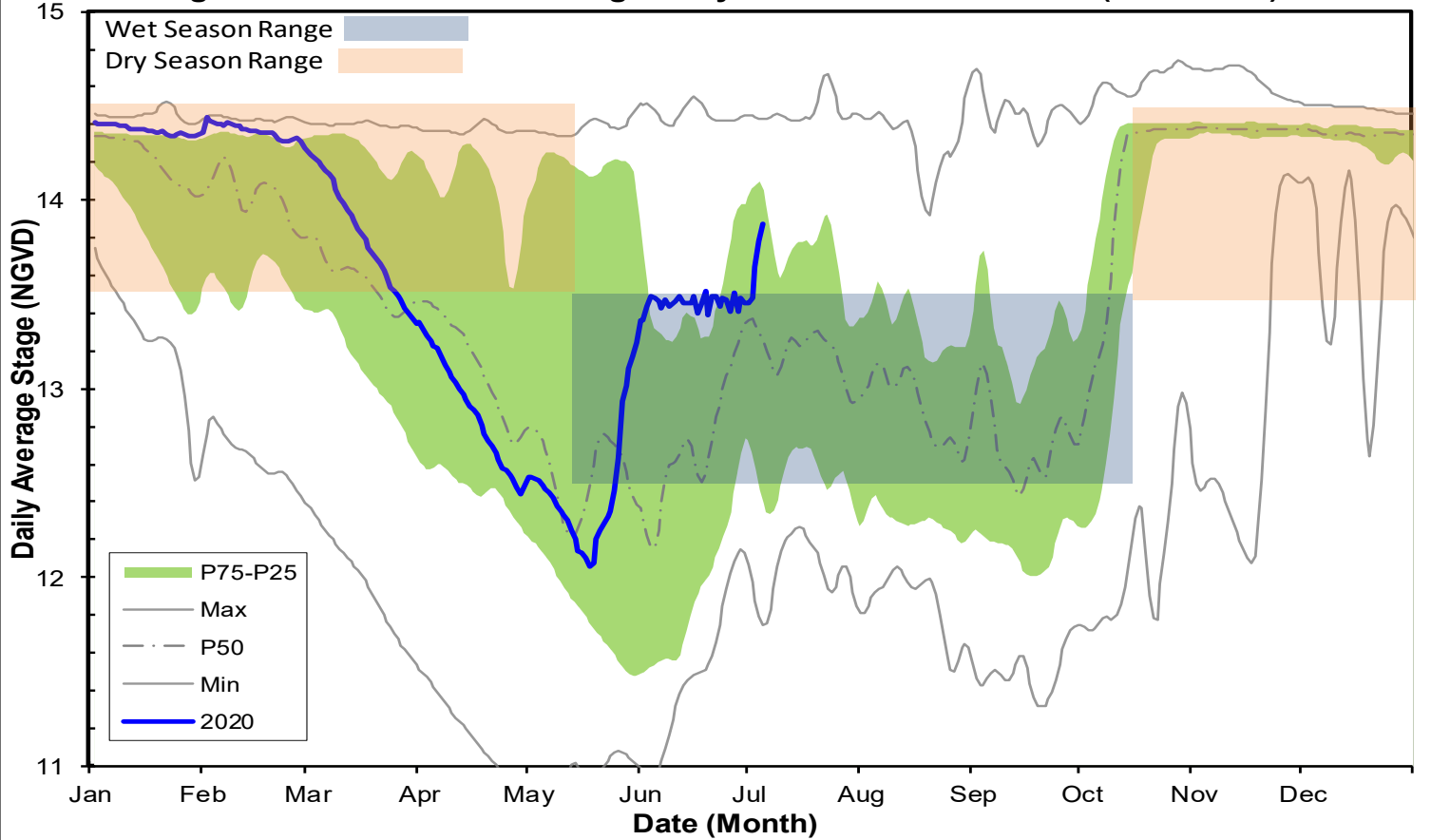


Figure 8A - HC1 Historic Average Daily Headwater Percentiles (1997-2018)

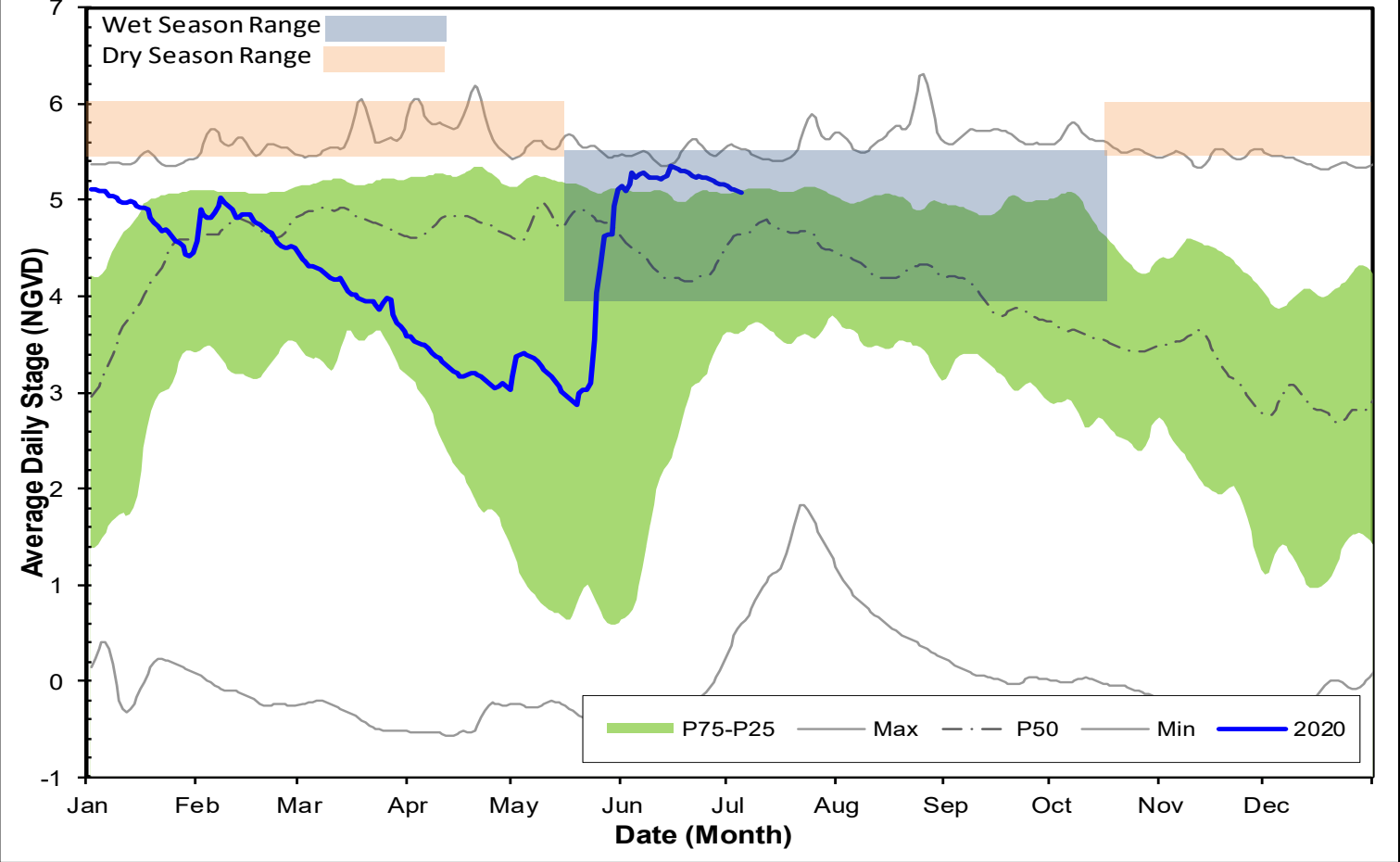
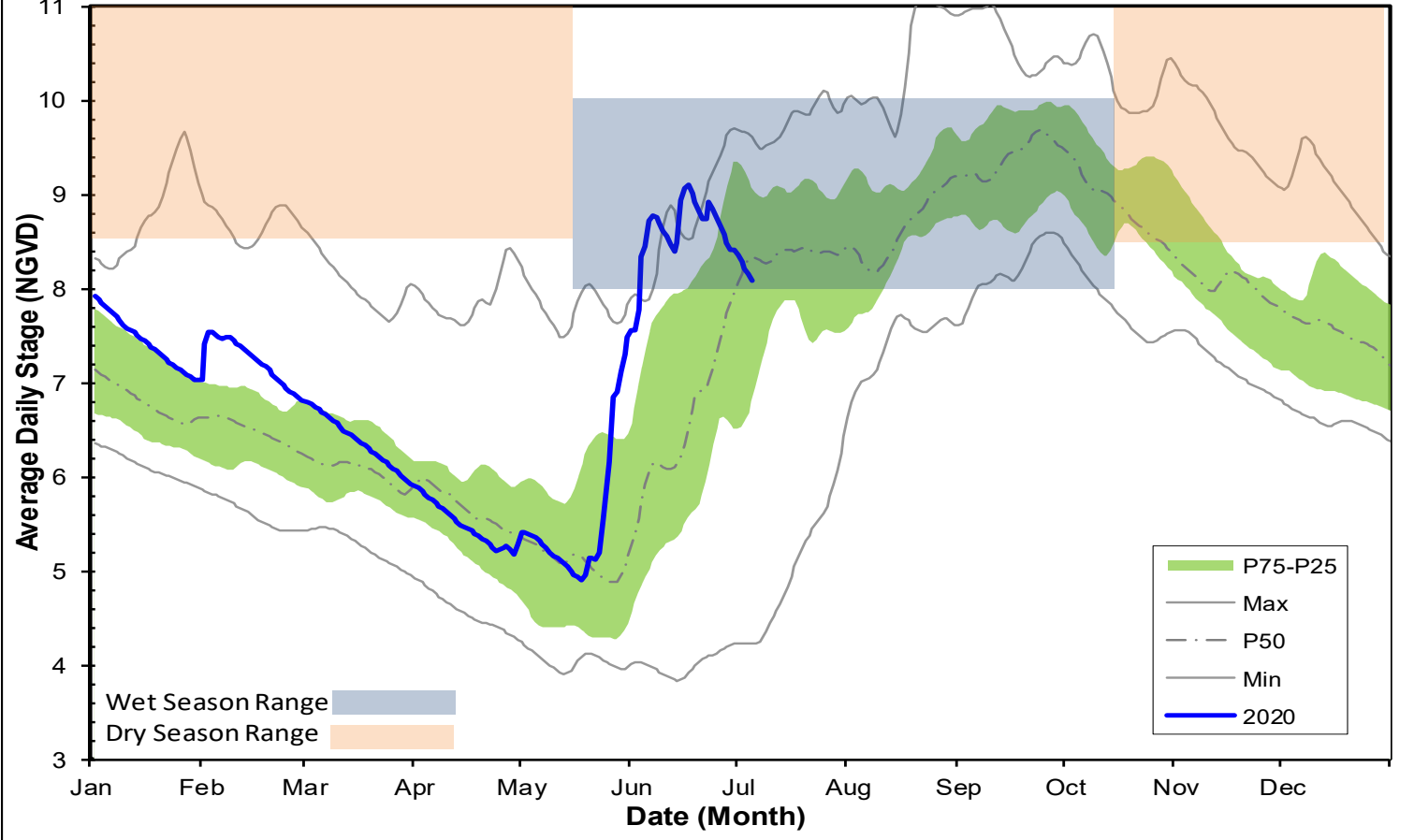


Figure 8B - HC2 Historic Average Daily Headwater Percentiles (2005-2018)



WATER CONDITIONS SUMMARY - June 2020
SELECTED STATIONS for BCB AREA / SW FLORIDA

Last Reading Date :		July 1, 2020					
Previous Period Reading Date:		May 31, 2020					
STATION INDEX NO.	WELL LOCATION	WELL / AQUIFER - TYPE	CHANGE (from previous date)	PREVIOUS LEVEL	CURRENT LEVEL (ft)	DIRECTION OF CHANGE	CONCERN INDICATOR
ALL INDICATOR LEVELS SHOWN IN FT-NGVD							
C-462	Immokalee	Lower Tamiami Aquifer	1.79	26.29	28.08	↑	GREEN
C-1004R	Naples	Lower Tamiami Aquifer	-1.14	2.06	0.92	↓	YELLOW
C-1224	Marco Lakes	Lower Tamiami Aquifer	0.15	4.07	4.22	↑	GREEN
L-2194	Bonita Springs	Sandstone Aquifer	2.02	2.02	3.95	↑	GREEN
L-2195	Bonita Springs	Surficial Aquifer System	1.03	8.41	9.44	↑	GREEN
L-738	Bonita Springs	Lower Tamiami Aquifer	0.91	-0.66	0.25	↑	GREEN

TABLE 2
BCB WATER CONDITIONS SUMMARY
JUNE 2020

BIG CYPRESS BASIN

JUNE 2020

GROUNDWATER LEVEL DAILY TRENDS COMPARED TO HISTORICAL AVERAGE

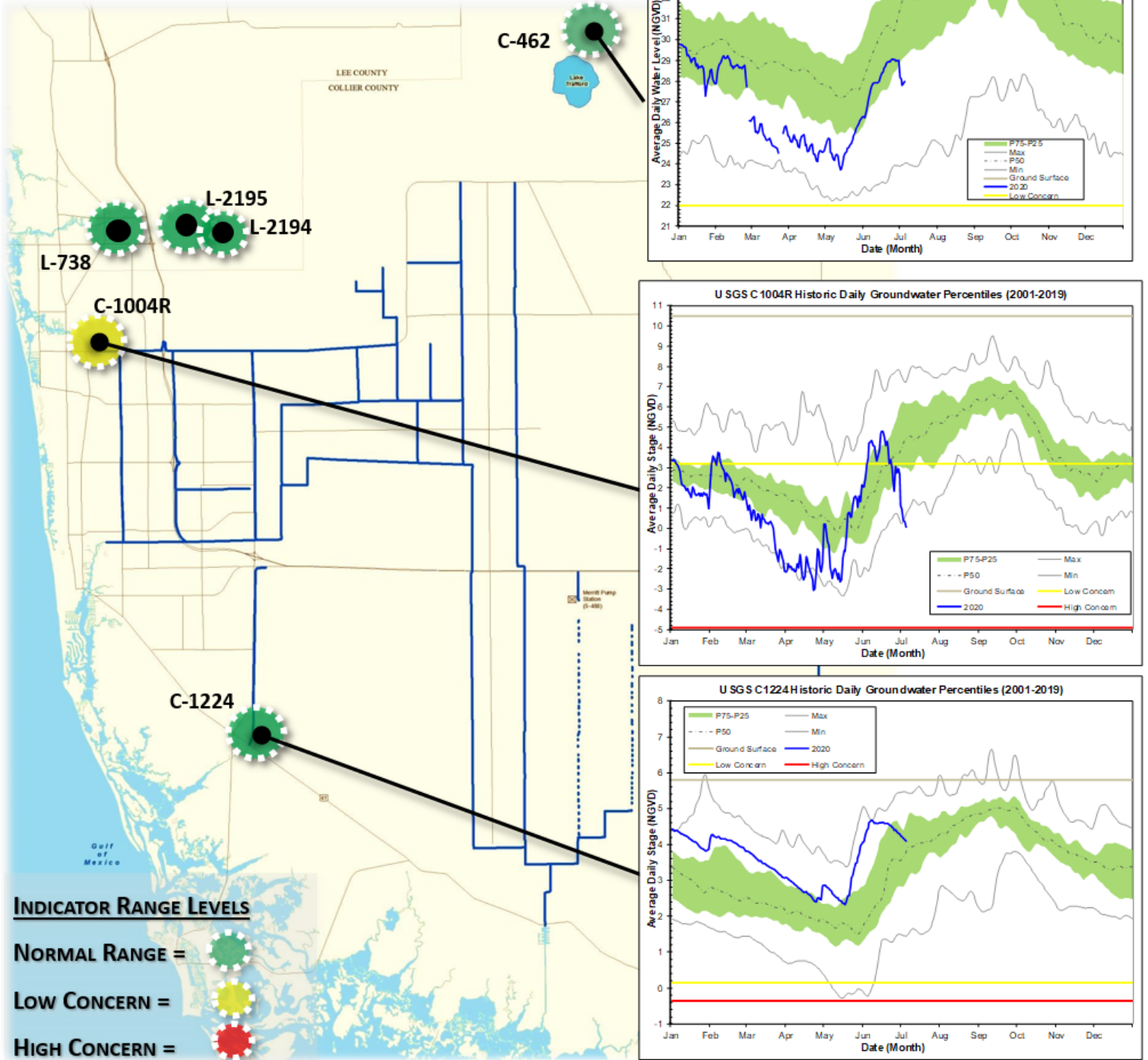


FIGURE 9

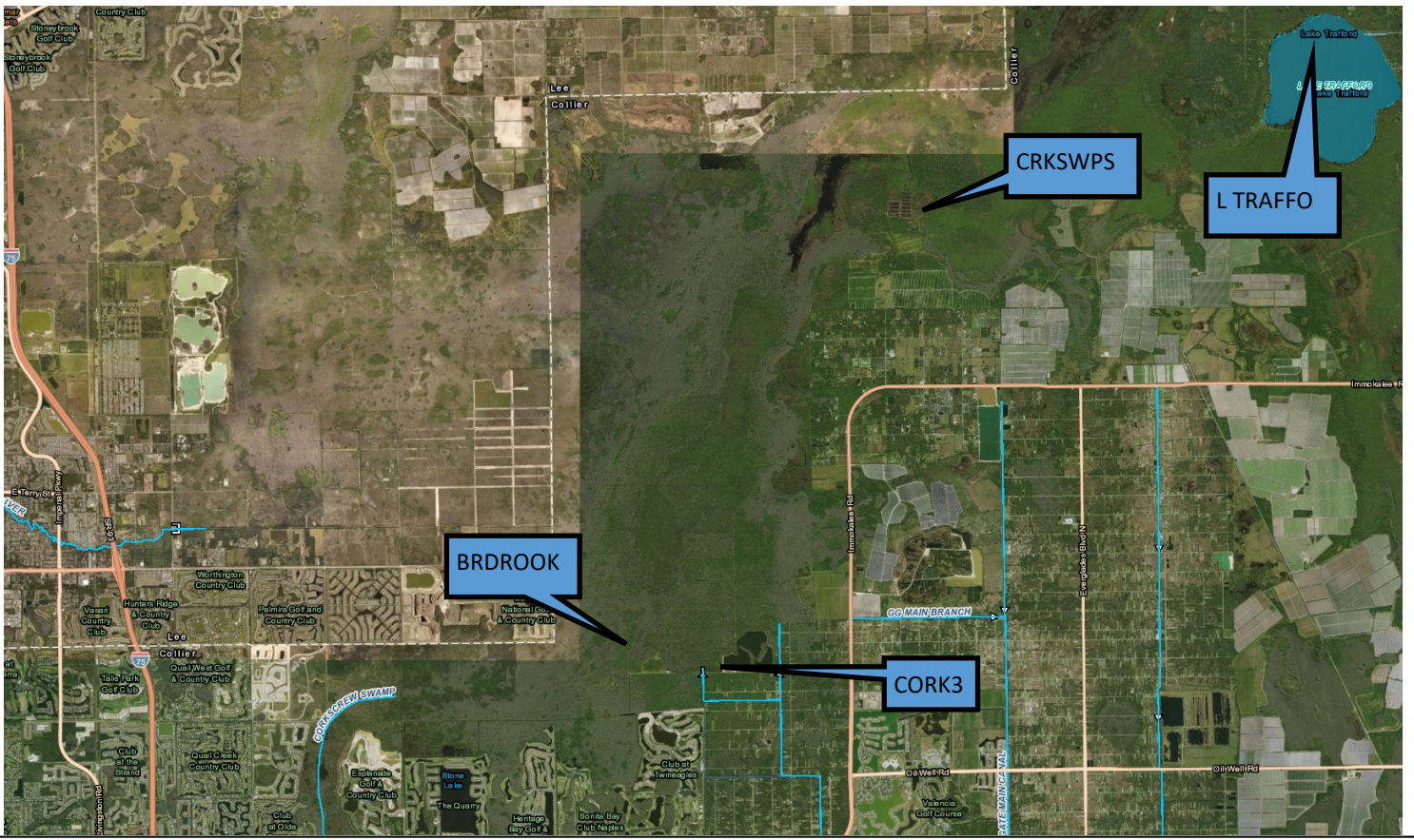


Figure 10-Corkscrew Historic Average Daily Headwater Percentiles(1984-2019)

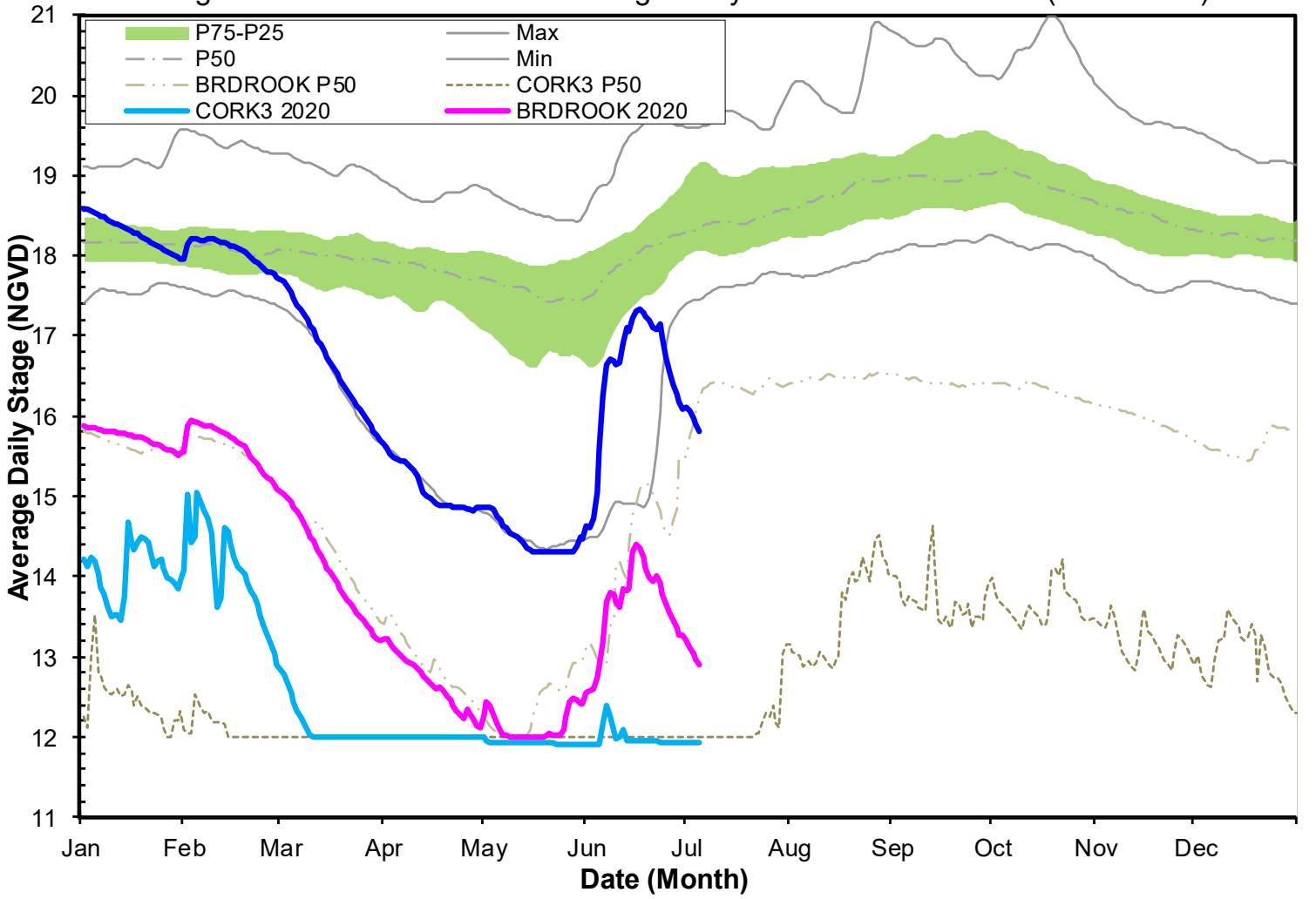


Fig 10A Lake Trafford Historic Daily Water Level Percentiles (1941-2019)

